



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area

**RTS**  
Machine Id  
**[RTS] 894**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (24 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0901450</b>	WC0901459	WC0843772
Sample Date		Client Info		<b>21 Jun 2024</b>	11 Apr 2024	03 Jan 2024
Machine Age	mls	Client Info		<b>397972</b>	386904	376595
Oil Age	mls	Client Info		<b>11068</b>	10309	12000
Filter Age	mls	Client Info		<b>11068</b>	10309	12000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	MARGINAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>21</b>	17	18
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>4</b>	3	2
Lead	ppm	ASTM D5185m	>25	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>100	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

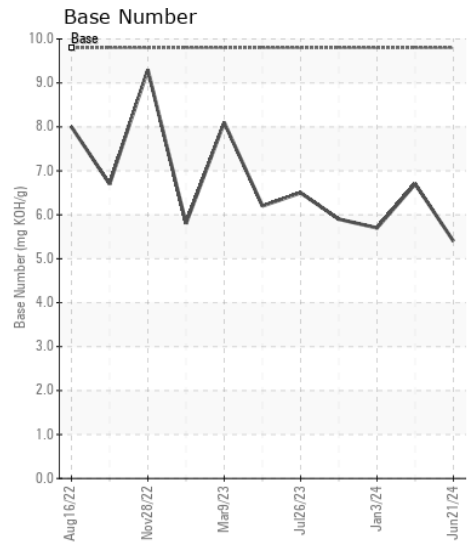
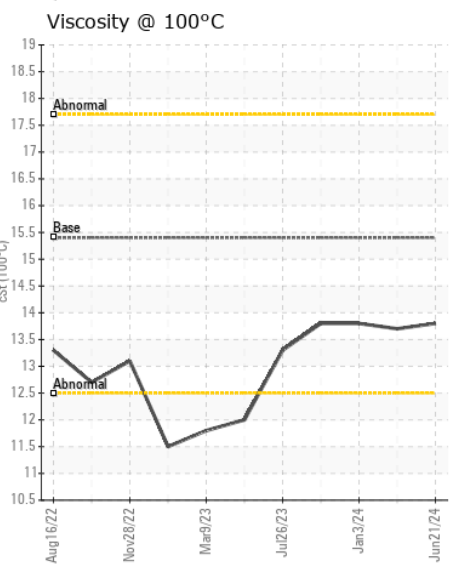
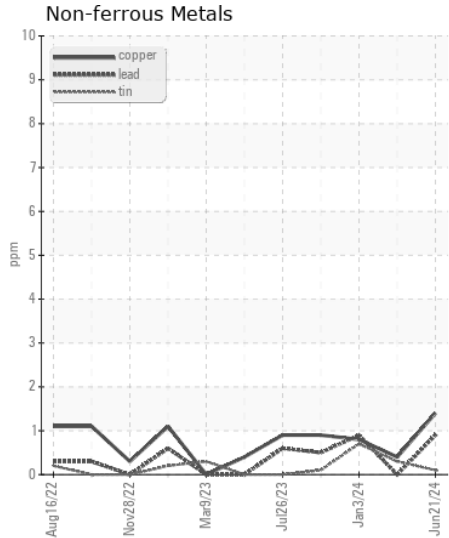
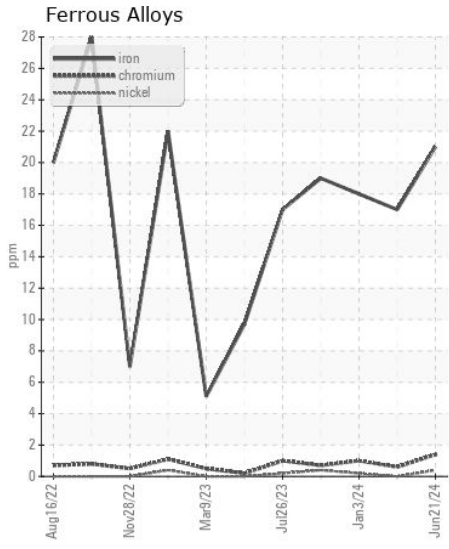
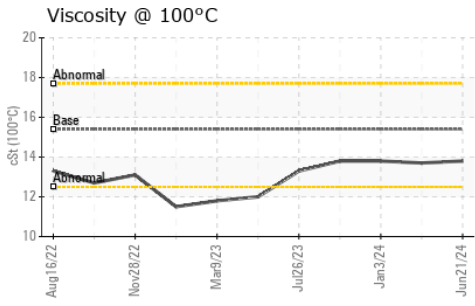
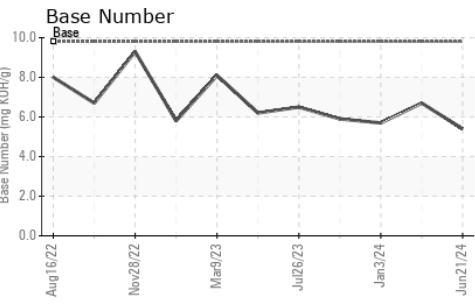
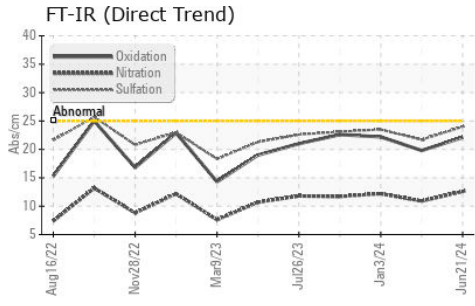
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	▲ 2.8	▲ 3.7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.6</b>	10.9	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.0</b>	21.7	23.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>9</b>	8	7
Boron	ppm	ASTM D5185m	0	<b>4</b>	4	10
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>68</b>	67	62
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>1065</b>	1119	980
Calcium	ppm	ASTM D5185m	1070	<b>1177</b>	1187	1101
Phosphorus	ppm	ASTM D5185m	1150	<b>1095</b>	1201	1063
Zinc	ppm	ASTM D5185m	1270	<b>1354</b>	1441	1256
Sulfur	ppm	ASTM D5185m	2060	<b>2882</b>	3709	2922
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.1</b>	19.8	22.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.4</b>	6.7	5.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	13.7	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0901450  
**Lab Number** : 06224240  
**Unique Number** : 11102437  
**Test Package** : FLEET  
**Received** : 28 Jun 2024  
**Tested** : 01 Jul 2024  
**Diagnosed** : 01 Jul 2024 - Wes Davis

**HUMBOLDT TRANSIT AUTHORITY**  
 133 V ST  
 EUREKA, CA  
 US 95501  
 Contact: KELLY MASTERSON  
 kelly@hta.org

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)